

Remarks

The Official Action dated March 2, 2007 has been carefully considered. It is believed that this Amendment, taken with the accompanying remarks establishes the patentability of the claims and places the present application in condition for allowance. Reconsideration and an early allowance are therefore respectfully requested.

By present Amendment, independent claim 30 is amended to more clearly reflect the teachings in the specification that the inventive compositions comprise a pre-mix composition as a specific composition ingredient, expressly disclosed at, *inter alia*, page 17, lines 2-5, and to underpin the teachings that the presently inventive composition comprises, *inter alia*, an emulsion of component ingredients conferring different properties to the inventive composition than the component ingredients alone. That is, the present inventive compositions comprise a pre-mix that is a unique ingredient and confers a unique functional characteristic to the inventive compositions. In addition, claim 30 is amended to re-organize the recitation order of the claim elements in order to increase the readability of the claim as a whole. Finally, one element relating to an instruction element is removed from independent claim 30 and new claim 34 is added to capture the deleted subject matter. As the Amendment does not involve the addition of new matter, entry is believed to be in order and is therefore respectfully requested.

Claims 3, 4, 6-18 and 30-34 remain pending in the present application and claims 3, 4, 11, 15-18 and 31-33 are currently subject to examination.

35 U.S.C. § 103(a)

The rejection of **Claims 3-5, 11, 15-18 and 30-33** under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,714,137 to Trinh et al. (Trinh), in view of U.S. Patent No. 5,676,163 to Behan et al. (Behan), and U.S. Patent 5,861,371 to Wilsch-Irrgang et al. (W-I) is maintained. As a preliminary matter, Applicants note that despite the rejection language used by the Examiner, this obviousness rejection is based upon a single reference, with the other "secondary references" asserted solely for purposes of evincing definitional and chemical classifications.

Specifically, the Examiner asserts that Trinh discloses aqueous, odor absorbing compositions for use on inanimate surfaces, the compositions comprising about 0.1% to about 5% by weight of solubilized, uncomplexed cyclodextrin (CD) and essentially free of any material which would stain or soil fabric, with a pH greater than about 3. The Examiner further asserts that "suitable" CD are disclosed, and that Trinh teaches that the CD "cavities should remain uncomplexed," stating that "this can be accomplished through the use of aqueous solvents and appropriate choice of perfume materials." The Examiner asserts that perfume is present up to about 0.5% and that Trinh teaches a preferred embodiment wherein at least about 75% of the perfume ingredients should have a Clog P of about 3 or smaller, and that most preferably at least about 75% of the perfume materials should come from the table beginning at the middle of col. 12, and notes that P.T. bucinal, cymal and hexyl cinnamic aldehyde are among these materials. The Examiner notes that "materials with a Clog P of this magnitude are relatively hydrophobic, having a thousand-fold preference for octanol over water." It is known in the art that the cavities of CD are hydrophobic and that CD forms inclusion complexes with molecules which bind in some manner to the hydrophobic cavity. The Examiner asserts that Trinh differs from the

claimed subject matter because it "does not specifically disclose use of a class I or II aldehyde in the recited amounts, or of an odor blocker in the recited amounts.

With respect to prior arguments by Applicants that Trinh fails to disclose emulsions of perfume ingredients and surfactants, the Examiner notes that this is correct, but asserts that it is nonetheless unconvincing for distinguishing purposes because Trinh discloses that undissolved materials such as perfumes may be dissolved using surfactants, and the Examiner concludes that this may emulsify the perfume. With regard to the express particle size limitation, the Examiner asserts that this appears to "be a function of the amount of perfume, emulsifying surfactant and shear applied to the mixture of the same." The Examiner denies patentable weight to this limitation unless Applicants demonstrate something critical about this particle size other than its being a mere artifact of the emulsification step. This rejection is traversed and reconsideration is respectfully requested.

Instant independent claim 30 (from which the other rejected claims depend) is directed to an odor-absorbing or neutralizing concentrated composition useable as an additive in one or more steps of a laundry process. the composition comprising: a pre-mix composition; solubilized, uncomplexed cyclodextrin; from about 0.0005 to about 1 weight percent of an effective amount of odor blocker; and from about 0.01 to about 1 weight percent of an effective amount of class I and/or class II aldehyde; wherein the pre-mix composition comprises a stable emulsion of a perfume and a surfactant material selected from the group consisting of: cyclodextrin compatible surfactants; polymers containing both hydrophobic and hydrophilic portions; and/or cationic fabric softening actives that form stable vesicles in a desired particle size range, said emulsion existing as particles in the desired particle size range of at least 0.01 microns in diameter, said perfume comprised of perfume ingredients having a ClogP of more

than about 3.5, said composition containing at least enough of said cyclodextrin to provide significant reduction in malodor that survives a typical laundry wash and having a pH of more than about 3 and being suitable for use as an additive in pretreating, washing, and/or rinsing of fabrics.

Applicants note that, as amended, claim 30 recites a pre-mix composition as a separate, discrete ingredient, rather than reciting the components of the pre-mix along with their functional attributes. Applicants submit that this clarifies a pre-mix as presently defined must be formulated, and then be combined with the other ingredients. In this instance, the whole is clearly not the sum of the parts. The components of the pre-mix must be subjected to processing to form the ingredients (generally, perfume and surfactant) into an emulsion of desired particle size. The particle size is not, as the Examiner suggests, arbitrarily determined by length of processing. Rather, the length of processing is set to yield the desired particle size. As disclosed in the present specification (e.g. page 8, lines 25-28), the particle size of the emulsion must be large enough that it will not complex with the CD ingredient of the composition. "The emulsion is formed first and stabilized before the cyclodextrin is added" (page 22, line 24). Hence, the present inventive composition does not merely comprise recited perfume and surfactants which may or may not emulsify to some degree, it comprises a pre-mix of a *stable* particulate emulsion of a specific and non-arbitrary diameter range, formed from shear-processing perfume and surfactant, *prior to* combination with the other ingredients recited in claim 30 to yield the present inventive compositions. The recited perfume ingredients, having clog P values in the hydrophobic range, would not form a stable emulsion with surfactant in the presence of CD, as the CD would effectively complex with the perfume with some binding affinity that would substantially prevent and destabilize any random emulsifying tendency.

Applicants emphatically note that it is understood by a chemist of ordinary skill in the formulation arts that emulsification is an endothermic process that is not going to happen spontaneously in the absence of processing.

The Trinh compositions, on the other hand, comprise hydrophobic perfumes in either free form, or already bound to CD, and the amount of uncomplexed CD is controlled by manipulating the size and relative hydrophobicity of the perfume molecules. There is no teaching or suggestion in Trinh of impeding access to the CD cavity by prior formulation of the perfume molecules into emulsions and subsequently adding the emulsion ingredient to the compositions. Applicants note that in order for the perfume molecules to form and exist as emulsions, the emulsifying step must be carried out prior to addition of the CD to the composition.

Applicants respectfully provide the following analogy for clarification. A composition comprises mayonnaise and tuna fish. How can it be said that a composition of tuna fish, egg yolks and vegetable oil discloses mayonnaise and tuna fish? It is true that mayonnaise is merely an emulsification, resulting from a slow combining and shear agitation process, of egg yolk and vegetable oil. But the stable emulsification known as mayonnaise is not going to form spontaneously in the composition comprising the components, nor will it function as intended with the tuna fish, even if some yolk is dispersed to some degree in the vegetable oil due to the presence of the emulsifying ingredient in the yolk and random association events. Typically, stable emulsifications (as another example, butter) are considered single ingredients, and have composition properties distinct from those of their components, unless, of course, ingredients are present in the composition which destabilizes or defeats the emulsification. The presently inventive compositions, comprising an emulsification, CD, and specified aldehydes, do not comprise ingredients that would destabilize the emulsification.

Once again, Applicants note that this is not a "product-by-process" claim or context. The pre-mix emulsification is a distinct ingredient. The emulsification itself is not novel, nor is the emulsifying process. However, the present inventors discovered a novel composition wherein perfume and CD may co-exist in the same composition without complexing, making the composition desirable as a laundry additive for malodor control, comprising emulsifications of perfume ingredients and CD. Upon use as intended, the CD remains uncomplexed and available for trapping and removal of undesirable odorous organic molecules, and the emulsion is destabilized by detergents, permitting the perfume to confer a desired fresh scent.

Since Trinh fails to teach or suggest compositions comprising the pre-mix as required by independent claim 30, the Trinh compositions, despite hypothetically containing small amounts of hydrophobic perfumes and certain surfactants, would not contain the distinct phase forms as required by instant independent claim 30, and which enable the CD to remain uncomplexed and functional to trap odor-causing molecules, in a composition also comprising hydrophobic perfume molecules of any size or degree of hydrophobicity.

As noted in the specification, formation of the perfume ingredient into an emulsion with a suitable surfactant represents a novel solution to the inherent incompatibility of certain perfume and CD ingredients that typically limits their co-inclusion in compositions wherein the CD cavity must remain uncomplexed in order to function as intended and where conferring a scent is also desirable. The present inventors seek to achieve the formulaic goal of having uncomplexed CD and hydrophobic perfume molecules of any size in the same composition by including the perfume ingredient as a pre-mix composition that exists as a stable emulsion. The emulsion particle size is important, as shearing must not result in particles sizes small enough to fit within the CD cavity, resulting in negating the benefits of the pre-mix.

Adding stable phase ingredient comprising the perfume, keeping the perfume molecules separate from the aqueous phase of the CD also confers a distinguishing effect with respect to the present inventive compositions and their intended functioning. The focus of the malodor control of the present invention is odor that lingers beyond the laundering step, that is, those odors that survive "washing" (e.g. column 1, paragraph 3). In this context, there is a need for compositions which provide longer-lasting odor control capability, a need which would be benefited by inclusion of at least partially hydrophobic perfumes in the composition. The Trinh compositions, on the other hand, are formulated for immediate control of odor and Trinh is therefore unconcerned with how to maintain hydrophobic perfumes in the composition, as hydrophilic perfumes are suitably and easily employed. Even when Trinh discloses embodiments suitable to confer "more intense" perfume effects, Trinh merely cautions against providing perfume ingredients in too high a ratio to the CD, such that an ineffective level of uncomplexed CD results (column 11, lines 45-65).

To establish *prima facie* obviousness of the claimed invention, all the claim limitations must be taught or suggested by the prior art, *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Trinh fails to disclose compositions comprising a pre-mix composition according to the present invention, and uncomplexed cyclodextrin, wherein the pre-mix comprises an emulsion of perfume ingredients having ClogP more than about 3.5, and specific surfactants that enable formation of emulsions within a desired particle range of at least 0.01 micron in diameter. Trinh, rather, teaches compositions which may comprise perfume ingredients, surfactant and CD, without any teaching or suggesting that the perfume ingredient be present in the form of a stable emulsion with the surfactant, and without any guidance as to how such an emulsion would be formed in the presence, or even absence, of CD. There is no teaching or suggestion of

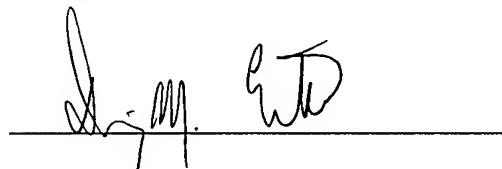
Amendment dated June 4, 2007
Application Serial No. 10/722,996
Response to Office Action dated March 2, 2007

application of shearing means or the energy necessary to achieve an emulsion, and there is no suggestion that a stable emulsion would inherently result from the combination of Trinh ingredients. The asserted secondary references, as the Examiner notes, are not relevant to this issue. Hence, instant independent claim 30 is nonobvious and patently distinguishable over Trinh, in view of Behan and W-I.

Dependent claims are nonobvious under §103 if the independent claims from which they depend are nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ 2d 1596 (Fed. Cir. 1988). Hence, the rejection under 35 U.S.C. § 103 of independent claim 30, and claims 3-4, 11, 15-18 and 31-33, dependent therefrom, has been overcome. Reconsideration is respectfully requested.

It is believed that the above is a comprehensive response to the rejections under 35 U.S.C. § 103 as asserted in the March 2, 2007 Office Action. Reconsideration and an early allowance are therefore respectfully requested.

Respectfully submitted,



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